UNITED STATES DEPARTMENT OF COMMERCE

PATENT AND TRADEMARK OFFICE

Application No.: 10/717,592

Applicant: Eva J. Tsai

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Title: BRAKE DRUM CALIPER

Examiner: Madeline Gonzalez

Art Unit No.: 2859

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To: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Under the provisions of 37 C.F.R. §1.192(c), Appellant Eva J. Tsai submits this Brief on Appeal. The fee of $250 for filing the brief by a small entity is enclosed.

(1). *Real party in interest.* The party named in the caption of the brief is the real party in interest.

(2). *Related appeals and interferences.* There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision on the appeal.

(3). *Status of claims.* Claims 1 and 5 are amended independent claims and claims 2 to 4 are original claims that are dependent from claim 1.

The claims on appeal are:

1. In a caliper having two jaws appended from a beam mounted transversely in relation to a cylinder capable of indicating distance between the jaws within the cylinder, characterized in that a stop on each jaw is movable longitudinally between at least two limits to permit the jaws to measure distance at measuring points corresponding to the at least two limit positions perpendicular to and equidistant from the beam.

2. A caliper as in claim 1 wherein the caliper measures the inside diameter of a generally cylindrical surface along at least two points precisely the same distance from the end of the cylindrical surface.

3. A caliper as in claim 1 wherein the movable stops limit the measuring points to from 20mm to 40mm apart.

4. A caliper as in claim 1 wherein the distance from the stop closest to the measuring point is at least 20mm.

5. A device for measuring the inside diameter of a brake drum comprising a fixed jaw with a point for measuring the maximum diameter at a point at one location along the friction surface of the drum and a movable jaw with a point for measuring the maximum diameter at the same distance from the edge of the friction surface, and stops movable longitudinally along the friction surface to keep the two opposed points the same distance along the friction surface of the drum.

(4) *Status of amendments*. There have been no amendments after the Final Rejection.

(5) *Summary of invention*. The present invention is an improvement over the Rogler patent 5,465,501 ("Rogler") as noted in the specification at page 1, line 10 to page 2, line 2. Rogler had slidable pins 26d, 26e, 26f and 26g on one jaw and slidable

pins 30d, 30e, 30f and 30g on the other jaw. Each pin had to be "selectively movable to clear or engage an abutment surface of the body" as shown by column 5, lines 60 to 62 of Rogler. As shown by Figures 2 and 3 of the drawings here, the slidable pins of Rogler are replaced by stops 22 and 26 that have two positions for accurately measuring depth at two locations: a lower location in Figure 2 and an upper location in Figure 3. These stops 22 and 26 move vertically through a range of 180 degrees between the lower and upper positions, and cannot become fouled like a slidable pins 26d-g and 30d-g in Figure 3 of Rogler. The stops 22 and 26 always engage an abutment surface, and are not movable to clear or engage an abutment surface. The improved device is cheaper to manufacture, less likely to become fouled, and not capable of being stuck in either the "clear or "engage" mode, as in Rogler. It is an improvement to have just two positions for stops 22 and 26, rather than multiple pins as in Rogler.

(6) *Issues*.

(1). Is it proper to finally reject an application where the sole reference relied upon for rejecting claims 1-4 is a patent that was never relied upon in the first Office Action and was not even cited as one of the four patents that were "prior art made of record and not relied upon," but considered pertinent, in the first Action?

(a). Are claims 1 and 2 anticipated by Lustenberger?

(b). Are claims 3 and 4 obvious in view of Lustenberger?

(c). Is claim 5 obvious in view of Lustenberger and Rogler?

(d). Is there a suggestion or motivation to combine Lustenberger and Rogler?

(7) *Grouping of claims*.

Claims 1 and 2 stand or fall together as being anticipated by Lustenberger.

Claims 3 and 4 stand or fall together as being obvious in view of Lustenberger.

Claim 5 stands alone as being obvious from Lustenberger in view of Rogler.

(8) *Argument*.

1. M.P.E.P.706.07 REQUIRES A CLEAR ISSUE TO BE DEVELOPED BEFORE FINAL REJECTION.

Raising Lustenberger for the first time in a Final Rejection, without an issue being framed as to the applicability of the reference, is improper. Lustenberger was cited in the Information Disclosure Statement by Applicant, which was initialed by the Examiner before the first Office Action. It was also cited during the prosecution of Rogler. It is a certainty that the Examiner was aware of Lustenberger before the first Office Action. However, while the Examiner made of record Rogler, Victor, Owens, Drenner and Johnson, she did not make Lustenberger of record. The amendments that were made were directed toward overcoming the cited Rogler patent, and clearly did not bring up any teaching that was in Lustenberger, a 1924 patent overcome by Rogler, on the grounds that Rogler had multiple measuring points longitudinally inside the cylinder.

Like Rogler, Applicant has more than one measuring point inside the cylinder, so Lustenberger can be distinguished from Applicant's invention just as Rogler was. It is improper to make a Final Rejection based upon the never cited Lustenberger patent, which is further afield than Rogler was. Rogler was the patent improved upon, as stated in the specification at pages 1 and 2. Dropping Rogler and relying upon the nonanalagous and ancient Lustenberger patent is a "hasty an ill-considered final

rejection" (M.P.E.P. 707.07). Applicant has been "prematurely cut off in the prosecution of . . . her application (*id.*). The Application has been denied "a thorough consideration of its merits" as is required.

Because of the extensive costs involved in appeals at the present time, Applicant does not seek to have the Final Rejection withdrawn and returned for further prosecution, only to have another appeal later. Instead, Applicant seeks to have the case allowed on the strength of this Brief, without having to expend judicial resources of the Board in considering this "hasty and ill-considered final rejection."

2. LUSTENBERGER DOES NOT HAVE TWO LIMIT POSITIONS WITHIN THE CYLINDER.

Amended claim 1 was presented to distinguish over the Rogler patent by specifying that the stops on the jaws of the caliper were "movable longitudinally between at least two limits to permit the jaws to measure distance at measuring points corresponding to the" limit positions perpendicular to the beam. By dropping the rejection based on Rogler, the Examiner has conceded that the amended claims 1 and 2 are patentable over Rogler.

The newly cited patent to Lustenberger was cited in the prosecution of the Rogler patent, which shows that Rogler was patentably distinct from Lustenberger. Lustenberger explains his invention at column 1, lines 14 to 27, as having main and supplemental caliper legs, the main legs have "inner surfaces 22 and 24" (column 2, line 71) for measuring the outside diameter of body A. If one wants to measure the inside body of a "sleeve to fit snugly over said body" (column 1. line 22), the

"supplemental legs 14 are slid outwardly" (column 2, lines 76-77) to engage the inside of body B (Figure 3).

Legs 22 and 24 of Lustenberger are not "within the cylinder" as specified in claim 1, so Lustenberger cannot be an anticipation under section 102(b) as held in the Final Rejection. They measure "the outside dimension of the body" A (column 1. lines 16-17, Figure 1). Moreover, the jaws in Lustenberger do not "measure distance at measuring points corresponding to the at least two limit positions perpendicular to and equidistant from the beam," as specified in claim 1.

Claim 2 adds the limitation that "the caliper measures the inside diameter" of a cylinder at two points. Lustenberger measured body B at only one point by "surfaces 26 of supplemental legs 14" (column 2, lines 81-82). This limitation is not shown in Lustenberger, so it cannot anticipate claim 2.

The rejection under Section 102(b) of claims 1 and 2 in group 1 must be reversed.

3. CLAIMS 3 AND 4 DEPEND FROM CLAIM 1, AND THE DIFFERENCES FROM LUSTENBERGER WERE NOT OBVIOUS TO A PERSON OF ORDINARY SKILL.

Claims 3 and 4 stand rejected under Section 103(a) as obvious in view of Lustenberger. Claim 1 is not obvious in view of Lustenberger because surfaces 22 and 24 of legs 6 and 8 measure outside diameter, and are not "within the cylinder" as claim 1 requires. Lustenberger is concerned with a mechanic matching the outside diameter of body A and the inside diameter of body B to be "fitted to the external surface of a body without changing the position of the main leg 8" (column 2, lines 87-89).

Applicant, on the other hand, is concerned only with presenting a precise diameter for a brake shoe to engage the inside surface of a brake drum. There is no reason why Applicant would want to measure the outside surface of the brake drum, since there is no "tubular member such, for instance, as sleeve to fit snugly over said body" (column 1, lines 21-22). There never is a sleeve to fit snugly over a brake drum.

There is no motivation to modify Lustenberger to measure the inside diameter of body B in multiple locations, since body B shown in dotted lines in Figure 3 does not have the depth of a brake drum. Lustenberger has nothing to do with brake drums, and therefore does not address the problem of uneven wear in a brake drum along the longitudinal surface contacted by brake shoes. The claims are not limited to brake drums, but they are limited to measuring the diameter of a cylinder at least two points within the cylinder, a concept utterly lacking in Lustenberger. There is no reason or suggestion in Lustenberger to measure body B at two locations longitudinally.

Claims 3 and 4, the two claims in group 2, depend from claim 1, so that if claim 1 is not obvious, claims 3 and 4 cannot be. Claim 3 specifies the distance between the measuring points inside the cylinder. The Examiner concedes that Lustenberger fails to show the range of distance between measuring points (paragraph 4), but erroneously assumes that Lustenberger has more than one measuring point longitudinally within body B. In fact, surfaces 26 make only one measurement of the inside diameter of sleeve B (Figures 3 and 4). There is no suggestion that Lustenberger could have multiple locations within the cylinder to measure diameter, since sleeve B is machined to fit snugly over shaft A in Lustenberger. It certainly is not obvious to have two measuring points 20 to 40 millimeters apart as claim 3 specifies. In 1924, when

Lustenberger was granted, it is likely that scale 4 was marked in inches, not metric. Scale 4 is marked in sixteenths, which suggests that shaft A is about an inch in diameter, and the length of sleeve B is less that a half inch. A half inch is less than 13 millimeters, so Lustenberger's teaching is a single measurement along a sleeve 13 millimeters in length. Obviousness is not determined from the precise figures of a drawing, but the difference between two measuring points 20 to 40 millimeters apart within a cylinder and a sleeve less than 13 millimeters in length is not a difference in degree; it is a difference in kind.

Likewise claim 4 specifies that the distance from measurement points 19 and 21 (specification page 4, last line to page 5, line 1) to the closest stop is at least 20 mm. Figure 3 in Lustenberger suggests that sleeve B is only 13 mm long, so it is not possible to have the first measuring point 20 mm away from the stop. It is not obvious to make a modification of the work piece in Lustenberger in that way.

There must be a suggestion in the prior art to modify the single measuring point into two measuring points 20 to 40 millimeters apart. "The mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984), quoted in *In re Laskowski*, 871 F. 2d 115 (Fed. Cir. 1989). *Laskowski* also stated that there must be a "reason or motivation to make that modification."

Lustenberger, the 1924 reference, must suggest that the modification not only could be carried out, but that it would be expected to be successful for the intended purpose. "Both the suggestion and the expectation of success must be founded in the

prior art, not in applicant's disclosure." *In re Dow Chemical*, 837 F.2d 469 (Fed. Cir. 1988).

There being no reason, no suggestion, no motivation to measure the inside diameter of sleeve B in Lustenberger in more than one place, the rejection of claims 3 and 4 must be reversed.

4. CLAIM 5 IS NOT SHOWN BY EITHER LUSTENBERGER OR ROGLER.

Claim 5 is rejected under Section 103(a) as being obvious in view of Lustenberger and Rogler. Lustenberger relates to calipers for measuring the outside dimension of a body A, such as a shaft (column 1, line 19) and the inside dimension of a body B, such as a "sleeve to fit snugly over said body" (column 1, line 22). Rogler, on the other hand, relates to a caliper for measuring "an internal or external cylindrical surface" (Abstract), with horizontally slidable stops that can be slid inwardly or outwardly to engage either the inside or the outside of a vertically oriented cylinder. The specific example in Rogler is a brake drum (column 1, line 10), which is machined on the inside surface to present an even surface for engaging brake shoes. The outside surface of the drum is not shown in Rogler Figure 3, only the inside surface 14. Rogler provides no example of measuring an outside surface of a cylinder.

Thus, if one were to combine the teachings of Lustenberger and Rogler, the outside measurements of Lustenberger would be disregarded and the inside measurement of the sleeve would be fitted with a plurality of depth stops 26*d*-26*g* and 30*d*-30*g* (column 3, lines 49-61). The Examiner has not explained how a plurality of depth stops like those in Rogler could be adapted for supplemental legs 14 in Lustenberger, which has only inside surfaces 26 for measuring body B in Figure 3.

The springs 18 in Lustenberger are for the purpose of taking supplemental legs 14 out of the way when measuring the outside diameter of body A (Figure 1). They are not shown to vary the location of surfaces 26 of legs 14 when measuring the inside diameter of body B (Figure 3). Surfaces 26 are either out of the way in the lower position of Figure 1 or raised to the upper location of Figure 3 when measuring the inside diameter of body B. There is no other alternative in Lustenberger.

It is therefore not clear how it could be obvious to one skilled in the art to put a plurality of slidable depth stops from Rogler into surfaces 26 of legs 14 in Lustenberger. Rogler teaches that the "specific construction of the depth stops is not critical for purposes of the present invention" at column 4, lines 11-12. However, that teaching was abandoned when the patent issued, since claim 1 of Rogler recites that it is critical to have "at least one pair of adjustable depth stops, permanently mounted on said jaws, one on each of said main jaw body portions being equally spaced a predetermined distance from associated anvils and each being selectively movable to clear or engage an abutment surface of the body to thereby selectively enable measurement of the dimension between said spaced surfaces at points equally spaced from said abutment surfaces." (column 5, lines 57-64). This passage is not clear as to whether one or a plurality of pairs of slidable pins are contemplated. The beginning of the passage states that "at least one" pair is required, but at the end of the passage, reference is made to plural "points equally spaced from said abutment surfaces," which suggests more than one pair of depth stops to allow measurement at a plurality of points.

In any event, putting even one pair of slidable depth stops from Rogler on legs 14 of Lustenberger would not result in the claimed invention of this application. Claim 1 requires a "stop on each jaw is movable longitudinally between at least two limits." Neither Lustenberger nor Rogler has a longitudinally movable stop. Legs 14 in Lustenberger Figure 1 do not act as a depth stop. Rather, legs 14 are merely out of the way because they are not needed in measuring outside diameter. The Examiner is simply wrong in assuming that legs 14 in Figure 1 of Lustenberger are depth stops. They are not. Surfaces 26 measure inside diameter only in the upper location, not in the out of the way location.

The rejection of claim 5 based on Lustenberger and Rogler cannot be sustained because neither shows a stop movable longitudinally along the inside surface of a cylinder.

5. THERE IS NO MOTIVATION TO COMBINE A SHAFT AND SLEEVE PATENT WITH A BRAKE DRUM PATENT.

The Claim 5 rejection must also be reversed because the combination of Lustenberger and Rogler is simply not plausible. The cases cited in connection with Point 3 are applicable here. There must be a reason for combining Lustenberger and Rogler. Merely using Applicant's disclosure as guide to search through the art for pieces to assemble is not proper. Lustenberger relates to the inside diameter of a sleeve machined to fit snugly over a shaft. It measured the outside diameter of body A in order to determine how to machine sleeve B to fit over it. A brake drum does not have anything fitting snugly over the outside dimension of the drum, since the outside

surface of a drum has no wear. The wear on a brake drum is on the inside surface, and nothing fits over the outside surface.

Lustenberger is not analogous to the Rogler patent. While Lustenberger was cited during the prosecution of the Rogler patent, it does not address the problem of wear on the inside surface of a brake drum. The wear contemplated by Lustenberger is the machining done to the inside diameter of sleeve B to allow it to fit snugly over body A. That machining is not likely to be uneven, as the wear of brake shoes on brake drums is. Accordingly, there is no need in Lustenberger to make sure that the lathe or other machine enlarging the inside diameter of sleeve B to fit over shaft A accurately machines the inside diameter. Machining contemplated by Lustenberger is by definition precise along the entire length of body B. It is nonanalogous art because it fails to address the uneven wear problem caused by rivets on brake shoes, misalignment of shoes, etc. There is no reason, suggestion or motivation to put a measuring device for an uneven inside surface combined with a measuring device for accurate machining to fit the even surface of a shaft over which it fits. Brake shoes are made to engage and disengage a drum surface. The inside surface of the drum is made even along its longitudinal length to accommodate brake shoes, not to fit snugly over brake shoes. The two problems addressed by these two references are entirely different. They cannot be combined to solve either problem, since they simply do not fit together.

The rejection of claim 5 must be reversed.

CONCLUSION

The final rejection was hasty and ill-considered, raising a nonanalogous patent to Lustenberger as making claims unpatentable that are clearly distinguishable from

Lustenberger. The Examiner has failed to draw a clear issue as to claim language met by the newly cited reference. The combination with Rogler is unsound, since such a combination has no suggestion or motivation in either of the cited patents. All of the grounds of rejection must be reversed and the case must be allowed.

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Respectfully submitted,

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I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the U.S. Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Dated: May 12, 2005 **JOHN P. SUTTON**
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